



GASOLINE

What is gasoline?

Gasoline is an extremely flammable fuel source for automobiles and other vehicles and equipment. It is a liquid that can be colorless, pale brown, or pale pink.

Gasoline is produced by refining petroleum, and it consists of a complex mixture of over 150 chemicals. The actual make-up of these chemicals varies by petroleum source, manufacturer, and even the time of year. Primary chemicals are benzene, toluene, ethylbenzene, xylenes, and oxygenates, including methyl tert-butyl ether (MTBE).

How can people be exposed to gasoline?

While gasoline is typically in liquid form, both liquid and vapors can enter the environment as it is manufactured, transported, transferred, pumped into a car's tank, or accidentally spilled. People most commonly are exposed to gasoline when they inhale vapors as they refuel vehicles and equipment.

Pumping gasoline after the automatic pump shut-off engages ('topping off' the tank) can overfill the tank, leading to spills that contaminate the ground and expose the person at the pump to liquid and vapors. Gasoline spills can contaminate soil and groundwater and waste fuel.

How can gasoline affect my health?

- **Breathing** – Inhaling gasoline and its components causes burning of the nose and throat, headache, and dizziness. Inhaling higher concentrations can lead to more serious effects, including coma and difficulty breathing. In addition, exposure to very high air concentrations can be deadly.
- **Ingesting** – Ingesting gasoline can irritate the stomach and can be fatal if swallowed in sufficient amounts.
- **Skin Contact** – Spilling gasoline on the skin or clothing can cause irritation.

The Environmental Protection Agency considers gasoline a possible human carcinogen.

How do I reduce exposure to gasoline and its components?

- Never "top off" your car's tank when fueling. Stop fueling when the gas pump's Stage II Vapor Recovery system shuts off.
- Allow lawnmowers and other gas-powered equipment to cool before refueling.

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Frequently Asked Questions

- Never refuel equipment with the engine running, as it could ignite gasoline liquid or vapors and cause a fire or explosion.
- Always store and transport gasoline in approved containers. Newer containers have built-in safety features.
- Never store gasoline inside your home.
- Always refuel cars and equipment in well-ventilated areas.
- Seal storage vessels tightly by capping and closing vents, leaving room for expansion. This will limit the amount of vapors released into the surrounding air.
- Never store gasoline near an open flame or heat source, as the vapors can ignite or explode.

Regulations

- The Delaware Department of Natural Resources and Environmental Control requires the reporting of all gasoline spills greater than 25 gallons.
- American Conference of Governmental Industrial Hygienists suggests a health and safety guidance level not to exceed 300 parts per million (time-weighted average, in air).

Technical Information for gasoline

CAS Number: 8006-61-9

Chemical Formula: NA

Carcinogenicity (IARC): Group A – known to be a human carcinogen (benzene)

MCL (Drinking Water): 5 ppb (Benzene)

Common Names: Gasoline, motor fuel, petrol

Common Uses: Automotive fuel

Resources

Agency for Toxic Substances and Disease Registry. *Toxicological Profile for Automotive Gasoline*. June, 1995. <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=468&tid=83>

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